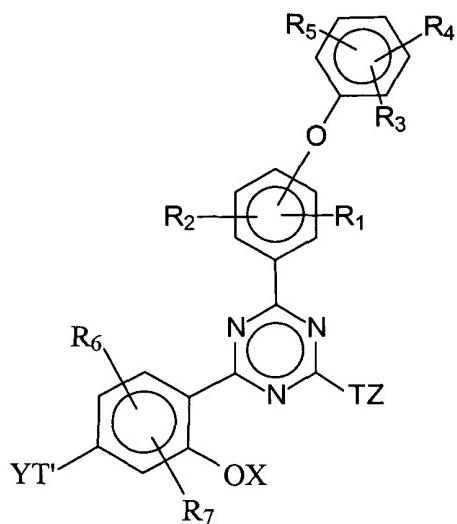


What is claimed is:

1. A compound of Formula I

5



10

Formula I

15

wherein R₁, R₂, R₃, R₄, R₅ are the same or different and each is hydrogen, halogen, alkyl of 1 to 24 carbon atoms, haloalkyl of 1 to 24 carbon atoms, aryl of 6 to 24 carbon atoms, alkenyl of 2 to 24 carbon atoms, acyl of 1 to 24 carbon atoms, aralkyl of 7 to 24 carbon atoms, aracyl of 6 to 24 carbon atoms, OR, NRR', CONRR', OCOR, CN, SR, SO₂R, SO₃H, SO₃M, wherein M is an alkali metal, R and R' are the same or different and each is hydrogen, alkyl of 1 to 24 carbon atoms, haloalkyl of 1 to 24 carbon atoms, aryl of 6 to 24 carbon atoms, alkenyl of 2 to 24 carbon atoms, acyl of 1 to 24 carbon atoms, cycloalkyl of 1 to 24 carbon atoms, cycloacyl of 5 to 24 carbon atoms, aralkyl of 7 to 24 carbon atoms, or aracyl of 6 to 24 carbons atoms, and optionally with either of R₁ and R₂, R₃ and R₄, or R₄ and R₅, taken together being a part of a saturated or unsaturated fused carbocyclic ring optionally containing O, N, or S atoms in the ring;

each of T and T' is independently a direct bond, oxygen, NR, sulfur or a functional groups containing these elements;

30

X is independently selected from hydrogen and a blocking group;

each of Y, R₆ and R₇ are each independently hydrogen, hydrocarbyl group, a functional hydrocarbyl group, halogen, hydroxyl, cyano, -O(hydrocarbyl), -O(functional hydrocarbyl), -N(hydrocarbyl)₂, -N(functional hydrocarbyl)₂, -N(hydrocarbyl)(functional hydrocarbyl), -S(hydrocarbyl), -S(functional hydrocarbyl), -SO₂(hydrocarbyl), -SO₂(functional hydrocarbyl), -SO₃(hydrocarbyl), -SO₃(functional hydrocarbyl),

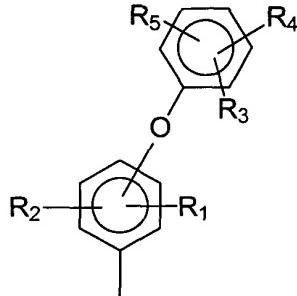
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-SO₂(functional hydrocarbyl), -SO₃(hydrocarbyl), -SO₃(functional hydrocarbyl),

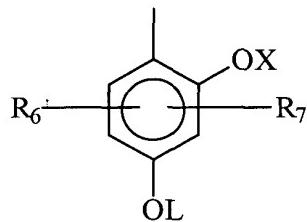
-CO₂(hydrocarbyl), -CO₂(functional hydrocarbyl), -CO(hydrocarbyl), -CO(functional hydrocarbyl), -OCO(hydrocarbyl), -OCO(functional hydrocarbyl), -CONH₂,
-CONH(hydrocarbyl), -CONH(functional hydrocarbyl), -CON(hydrocarbyl)₂,
-CON(hydrocarbyl)(functional hydrocarbyl), -CON(functional hydrocarbyl)₂, wherein
5 the hydrocarbyl or functional hydrocarbyl may be the same or different and has 1 to
24 carbon atoms;

Z is Y,

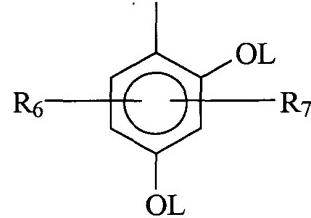
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15



or



20

and wherein L is hydrogen, a hydrocarbyl of 1 to 24 carbon atoms, or a functional hydrocarbyl of 1 to 24 atoms.

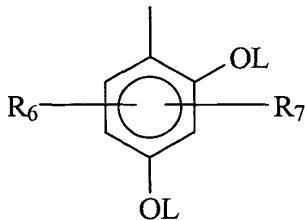
25 2. A compound according to claim 1 wherein T' is an oxygen atom and Y is L.

3. A compound according to claim 2 wherein L is selected from the group consisting of: hydrogen; an alkyl of 1 to 24 carbon atoms optionally substituted by one or more hydroxy, alkoxy, carboxy, carboalkoxy, amino, amido, carbamato, or epoxy groups, and which may 30 contain one or more carbonyl groups, oxygen atoms or nitrogen atoms in the chain; an alkenyl of 2 to 24 carbon atoms optionally substituted by one or more hydroxy, alkoxy, carboxy, carboalkoxy, amino, amido, carbamato, or epoxy groups, and which may contain one or more carbonyl groups, oxygen atoms or nitrogen atoms in the chain; an aralkyl of 7 to 24 carbon atoms optionally substituted by one or more hydroxy, alkoxy, chloro, cyano, carboxy, carboalkoxy, amino, amido, carbamato, or epoxy groups, and which 35

- may contain one or more carbonyl groups, oxygen atoms or nitrogen atoms in the chain;
- a polyoxyalkylene radical of the Formula XII
- CH₂—CH(OH)—CH₂—O—(CH₂—(CH₂)_u—O—)_{mm}—D₁ (XII)
- wherein D₁ is hydrogen,
- 5 —CH₂—CH(OH)—CH₂—OH, —CH₂—CH₂—CH₂ or R²⁵
-
- a polyoxyalkylene radical of the Formula XIII
- CO—(CH₂)_u—O—(CH₂—(CH₂)_u—O—)_{mm}—D₂ (XIII)
- wherein D₂ is —(CH₂)_u—CO—R²² or R²⁵;
- 10 a polyoxyalkylene radical of the Formula VIII
- YY—O—CO—(CH₂)_u—O—(CH₂—(CH₂)_u—O—)_{mm}—D₃ (XIV)
- wherein D₃ is —(CH₂)_u—CO—R²² or R²⁵;
- 15 a polyoxyalkylene radical of the Formula XV
- (CH₂)_{kk}—CH(R²¹)—CO—B₁—(C_{nn}H_{2nn}—O—)_{mm}—C_{nn}H_{2nn}—B₁—D₄ (XV)
- wherein D₄ is hydrogen of R²⁵;
- 20 a polyoxyalkylene radical of the Formula XVI
- CO—CH₂—CH₂—NH—(C_{nn}H_{2nn}—O—)_{mm}—C_{nn}H_{2nn}—D₅ (XVI)
- wherein D₅ is —NH₂, —NH—(CH₂)₂—COO—R²³ or —O—R²⁵,
- 25 a polyoxyalkylene radical of the Formula XVII
- YY—O—CO—CH₂—CH₂—NH—(C_{nn}H_{2nn}—O—)_{mm}—C_{nn}H_{2nn}—D₅ (XVII)
- wherein D₅ is as defined under Formula (XVI);
- a polyoxyalkylene radical of the Formula XVIII
- (C_{nn}H_{2nn}—O—)_{mm}—C_{nn}H_{2nn}—D₆ (XVIII)
- wherein D₆ is —NH—CO—R²⁴, —OR²⁵, OH or H;
- 25 a polyoxyalkylene radical of the Formula XIX
- CH(R₁₇)—CH₂—(OCH(R₁₇))—CH₂)_m—D₇ (XIX)
- wherein D₇ is —OR²⁵, —NHCOR²⁴ or —OCH₂CH₂OR²⁵;
- R²¹ is hydrogen or C₁—C₁₆ alkyl;
- R²² is halogen or —O—R²³;
- 30 R²³ is hydrogen, C₁—C₆ alkyl, C₃—C₆ alkenyl, aryl, or aryl—C₁—C₄—alkyl;
- R²⁴ is hydrogen, C₁—C₁₂ alkyl or aryl;
- R²⁵ is C₁—C₁₆ alkyl, C₅—C₁₂ cycloalkyl, C₃—C₆ alkenyl, C₁—C₁₂ alkylaryl or aryl—C₁—C₄ alkyl;

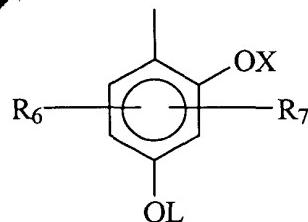
R²⁶ is hydrogen or C₁—C₄ alkyl;
R²⁷ is hydrogen, C₁—C₁₈ alkyl, C₃—C₆ alkenyl, C₁—C₁₈ alkoxy, halogen or aryl—C₁—C₄—alkyl;
R²⁸ and R²⁹ independently of one another are hydrogen,
5 C₁—C₁₈ alkyl, C₃—C₆ alkenyl, C₁—C₁₈ alkoxy, or halogen;
R³⁰ is hydrogen, C₁—C₄ alkyl or CN;
YY is unsubstituted or substituted C₂—C₂₀ alkyl;
kk is zero or an integer from 1-16;
B₁ is O or NH;
10 mm is an integer from 2 to 60;
nn is an integer from 2 to 6;
u is an integer from 1 to 4.

4. A compound according to claim 4 wherein TZ is

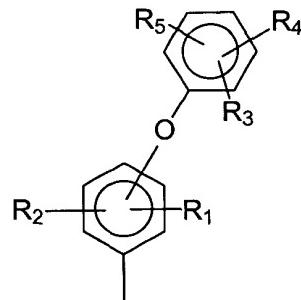


and wherein L is hydrogen, a hydrocarbyl group of 1 to 24 carbon atoms, or a functional hydrocarbyl group of 1 to 24 carbon atoms;
X is independently selected from hydrogen and a blocking group; and
R₆ and R₇ are independently hydrogen, hydrocarbyl, functional hydrocarbyl, halogen,
25 hydroxyl, —O(hydrocarbyl), —O(functional hydrocarbyl), —S(hydrocarbyl), —SO₂(hydrocarbyl), —SO₃(hydrocarbyl), —COO(hydrocarbyl), —CO(hydrocarbyl), —OCO(hydrocarbyl), —N(hydrocarbyl)(hydrocarbyl), —S(functional hydrocarbyl), —SO₂(functional hydrocarbyl), —SO₃(functional hydrocarbyl), —COO(functional hydrocarbyl), —CO(functional hydrocarbyl), —OCO(functional hydrocarbyl), —N(functional hydrocarbyl)(functional hydrocarbyl) or cyano.
30

5. A compound according to claim 2 wherein R₁ to R₇ and X are hydrogen, and TZ is



5 6. A compound according to claim 1 wherein TZ is:



10

7. A compound according to claim 6 wherein T' is oxygen and Y is L

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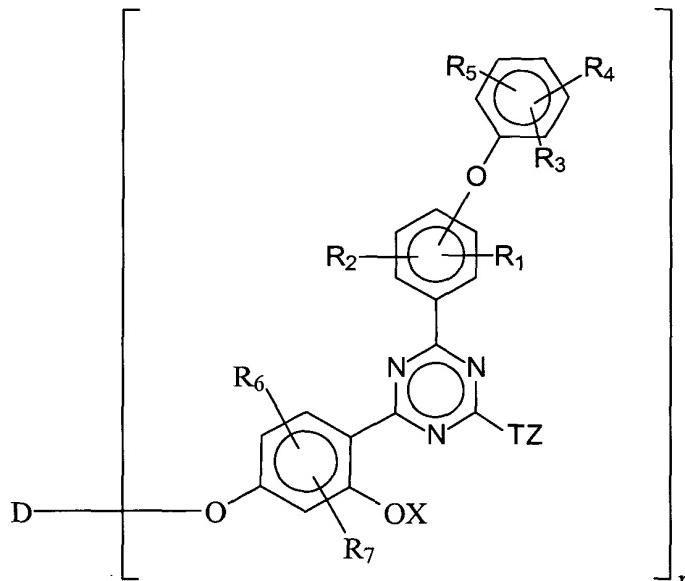
8. A compound according to claim 7 wherein R₁ to R₇ and X are hydrogen.

9. A compound of Formula VI:

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25

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(Formula VI)

wherein T, Z, R₁ to R₇, X are as defined in claim 1, and r is an integer between 2 and 4;

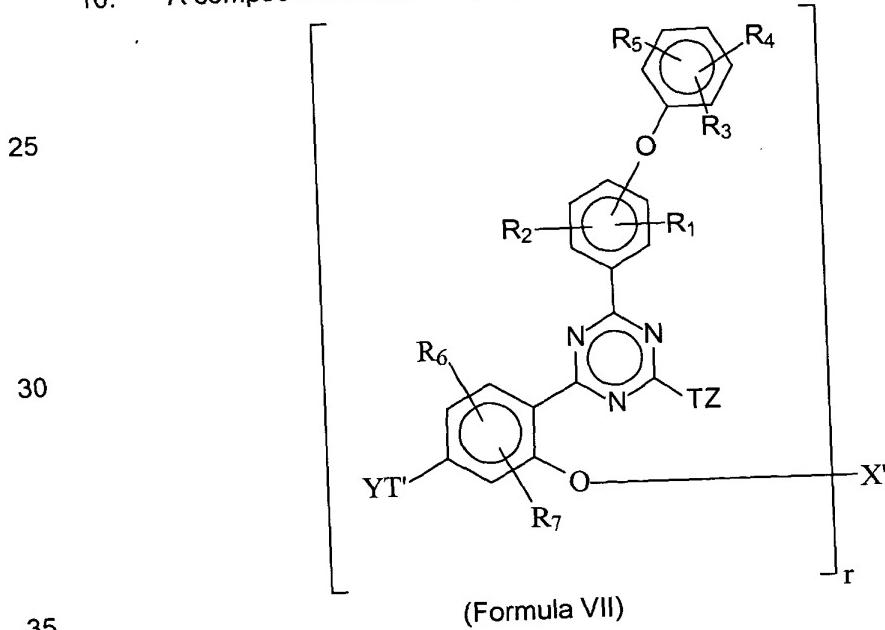
when r is 2, D is selected from the group consisting of C₂—C₁₆ alkyl, C₄—C₁₂ alkenyl, 35 xylylene, C₃—C₂₀ alkyl which is interrupted by one or more oxygen atoms, hydroxy-

substituted C₃—C₂₀ alkyl which is interrupted by one or more oxygen atoms, —CH₂CH(OH)CH₂O—R¹⁵—OCH₂CH(OH)CH₂, —CO—R¹⁶—CO—, —CO—NH—R¹⁷—NH—CO—, —(CH₂)_s—COO—R¹⁸—OCO—(CH₂)_s—

5 a polyoxyalkylene bridge member of the Formula XX
—CH₂—CH(OH)—CH₂—O—(CH₂—(CH₂)_u—O—)_{mm}—CH₂—CH(OH)—CH₂— (XX),
a polyoxyalkylene bridge member of the Formula XXI
—CO—(CH₂)_u—O—(CH₂—(CH₂)_u—O—)_{mm}—(CH₂)_u—CO— (XXI),
a polyoxyalkylene bridge member of the Formula XXII
—YY—O—CO(CH₂)_u—O—(CH₂—(CH₂)_u—O—)_{mm}—(CH₂)_u—COO—YY— (XXII),
10 a polyoxyalkylene bridge member of the Formula XXIII
—(CH₂)_{kk}—CH(R²¹)—CO—B₁—(C_{nn}H_{2nn}—O—)_{mm}C_{nn}H_{2nn}—B₁—CO—CH(R²¹)—
(CH₂)_{kk}— (XXIII),
a polyoxyalkylene bridge member of the Formula XXIV
—COC(R²¹)HCH₂NH(C_{nn}H_{2nn}O)_mC_{nn}H_{2nn}—NHCH₂—C(R²¹)HCO—
15 a polyoxyalkylene bridge member of the Formula XXV
—YY—O—CO—(CH₂)₂—NH—(C_{nn}H_{2nn}—O—)_{mm}—C_{nn}H_{2nn}—NH—(CH₂)₂
COO—YY— (XXV),
a polyoxyalkylene bridge member of the Formula XXVI
—(C_{nn}H_{2nn}—O—)_{mm}—C_{nn}H_{2nn}— (XXVI),
20 and a polyoxyalkylene bridge member of the Formula XXVII
—CH(CH₃)—CH₂—(O—CH(CH₃)—CH₂)_a—(O—CH₂—CH₂)_b—
(O—CH₂—CH(CH₃)_c— (XXVII),
wherein a + c = 2.5 and b = 8.5 to 40.5 or a + c = 2 to 33 and b = 0,
R²¹ is hydrogen or C₁—C₁₆ alkyl,
25 R²² is halogen or —O—R²³,
R²³ is hydrogen, C₁—C₆ alkyl, C₃—C₆ alkenyl, aryl, or aryl—C₁—C₄—alkyl,
R²⁴ is hydrogen, C₁—C₁₂ alkyl or aryl,
R²⁵ is C₁—C₁₆ alkyl, C₅—C₁₂ cycloalkyl, C₃—C₆ alkenyl,
C₁—C₁₂ alkylaryl or aryl—C₁—C₄ alkyl,
30 R²⁶ is hydrogen or C₁—C₄ alkyl,
R²⁷ is hydrogen, C₁—C₁₈ alkyl, C₃—C₆ alkenyl, C₁—C₁₈ alkoxy, halogen or aryl—C₁—C₄ alkyl,
R²⁸ and R²⁹ independently of one another are hydrogen, C₁—C₁₈ alkyl, C₃—C₆ alkenyl, or
35 C₁—C₁₈ alkoxy, or halogen;

R³⁰ is hydrogen, C₁—C₄ alkyl or CN,
 YY is unsubstituted or substituted C₂—C₂₀ alkyl,
 kk is zero or an integer from 1-16,
 B₁ is O or NH,
 5 mm is an integer from 2 to 60,
 nn is an integer from 2 to 6,
 u is an integer from 1 to 4;
 when r is 3, D is $-(\text{CH}_2)_s-\text{COO}-$ ₃—R¹⁹
 and when r is 4, D is $-(\text{CH}_2)_s-\text{COO}-$ ₄—R²⁰
 10 wherein R¹⁹ is C₃—C₁₀ alkanetriyl and R²⁰ is C₄—C₁₀ alkanetetryl; and
 s is 1-6;
 R¹⁵ is C₂—C₁₀ alkyl, C₂—C₁₀ oxaalkyl or C₂—C₁₀ dithiaalkyl, phenyl, naphthyl,
 diphenyl, or C₂—C₆ alkenyl, or phenylene-XX-phenylene wherein XX is —O—, —S—,
 —SO₂—, —CH₂—, or —C(CH₃)₂—;
 15 R¹⁶ is C₂—C₁₀ alkyl, C₂—C₁₀ oxaalkyl or C₂—C₁₀ dithiaalkyl, phenyl, naphthyl,
 diphenyl, or C₂—C₆ alkenyl provided that when r is 3 the alkenyl has at least 3
 carbons;
 R¹⁷ is C₂—C₁₀ alkyl, phenyl, naphthyl, diphenyl, or C₂—C₆ alkenyl,
 methylenediphenylene, or C₄—C₁₅ alkylphenyl; and
 20 R¹⁸ is C₂—C₁₀ alkyl, or C₄—C₂₀ alkyl interrupted by one or more oxygen atoms.

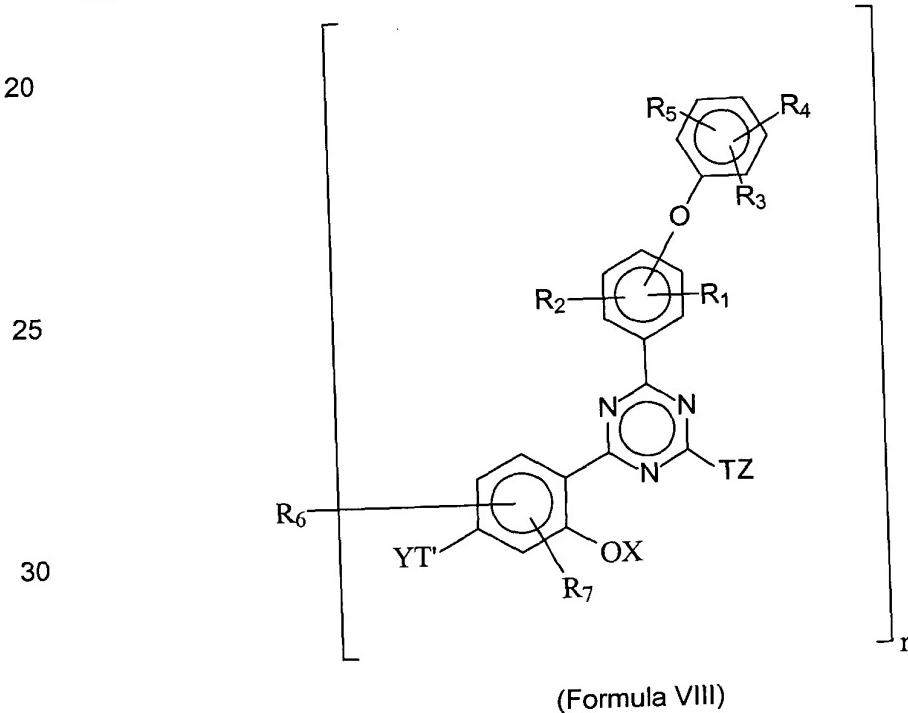
10. A compound of Formula (VII):



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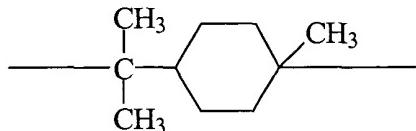
- wherein T, T', Y, Z, R₁ to R₇, are as defined in claim 1; r is 2 or 3;
when r is 2, X' is —CO—R¹⁶—CO—, —CO₂—R¹⁶—CO₂—, —SO₂—R¹⁶—SO₂—,
—CO—NH—R¹⁷—NH—CO—, a polyoxyalkylene bridge member of Formula
5 —CO—(CH₂)_u—O—(CH₂—(CH₂)_u—O—)_m—(CH₂)_u—CO—, or
—COC(R²¹)HCH₂NH(C_nH_{2n}O)_mC_nH_{2n}NHCH₂C(R²¹)HCO—
- when r = 3, X' is:
—(—CO₂—R¹⁶)R¹⁹, —(—CONH—R¹⁶)R¹⁹, —(—SO₂—R¹⁶)R¹⁹
10 wherein R¹⁹ is C₃—C₁₀ alkanetriyl and
R¹⁶ is C₂—C₁₀ alkyl, C₂—C₁₀ oxaalkyl or C₂—C₁₀ dithiaalkyl, phenyl, naphthyl, diphenyl, or
C₂—C₆ alkenyl provided that when r is 3 the alkenyl has at least 3 carbons;
C₂—C₁₀ alkyl, phenyl, naphthyl, diphenyl, or C₂—C₆ alkenyl, methylenediphenylene, or
R¹⁷ is C₂—C₁₀ alkyl, phenyl, naphthyl, diphenyl, or C₄—C₁₅ alkylphenyl; and
15 R¹⁸ is C₂—C₁₀ alkyl, or C₄—C₂₀ alkyl interrupted by one or more oxygen atoms; and
R²¹ is hydrogen or C₁—C₁₆ alkyl.

11. A compound of Formula (VIII):



- 35 wherein T, T', Y, Z, R₁ to R₅, R₇ and X, are as defined in claim 1;

R_6 is selected from the group consisting of straight chain alkyl of 1 to 12 carbon atoms, branched chain alkyl of 1 to 12 carbon atoms, cycloalkyl of 5 to 12 carbon atoms, alkyl substituted by cyclohexyl, alkyl interrupted by cyclohexyl, alkyl substituted by phenylene, alkyl interrupted by phenylene, benzylidene, $-S-$, $-S-S-$, $-S-$
5 $E-S-$, $-SO-$, $-SO_2-$,
 $-SO-E-SO-$, $-SO_2-E-SO_2-$, $-CH_2-NH-E-NH-CH_2-$, and

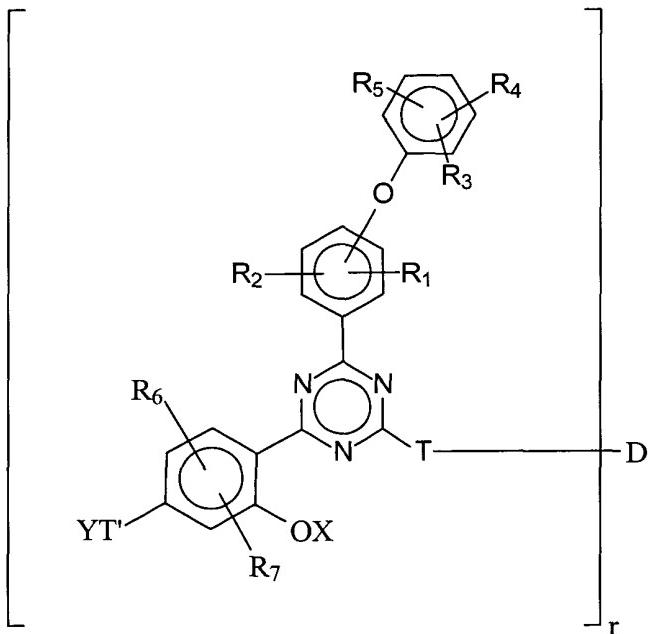


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wherein E is selected from the group consisting of alkyl of 2 to 12 carbon atoms, cycloalkyl of 5 to 12 carbon atoms, alkyl interrupted by cyclohexyl of 8 to 12 carbon atoms, alkyl terminated by cyclohexyl of 8 to 12 carbon atoms; and
r is an integer between 2 and 4

15

12. A compound of Formula IX



(Formula IX)

20

wherein T, T', Y, X, and R₁ to R₇ are defined as in claim 1;

r is an integer between 2 and 4;

when r is 2, D is selected from the group consisting of C₂—C₁₆alkylene, C₄—

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C₁₂alkenylene, xylylene, C₃—C₂₀alkylene which is interrupted by one or more oxygen

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atoms, hydroxy-substituted C₃—C₂₀alkylene which is interrupted by one or more oxygen atoms, —CH₂CH(OH)CH₂O—R¹⁵—OCH₂CH(OH)CH₂, —CO—R¹⁶—CO—, —CO—NH—R¹⁷—NH—CO—, and —(CH₂)_s—COO—R¹⁸—OCO—(CH₂)_s; and

5 when r is 3, D is —[-(CH₂)_s—COO-]₃—R¹⁹
and when r is 4, D is —[-(CH₂)_s—COO-]₄—R²⁰

wherein R¹⁹ is C₃—C₁₀alkanetriyl and R²⁰ is C₄—C₁₀alkanetetryl;
s is 1-6;

10 R¹⁵ is C₂—C₁₀ alkylene phenylene or a phenylene-x-phenylene- group, wherein X is
—O—, —S—, —SO₂—, —CH₂—, or —C(CH₃)₂—;
R¹⁶ is C₂—C₁₀ alkylene, C₂—C₁₀ oxaalkylene or C₂—C₁₀ dithiaalkylene, phenylene,
naphthylene, diphenylene or C₂—C₆ alkenylene;
R¹⁷ is C₂—C₁₀ alkylene, phenylene, naphthylene, methylenediphenylene or C₇—C₁₅
alkylphenylene, and
R¹⁸ is C₂—C₁₀ alkylene or C₄—C₂₀ alkylene which is interrupted by one or more
oxygen atoms.

13. A method of stabilizing a material which is subject to degradation by actinic radiation
20 by incorporating said material with the compound of claim 1.

14. The method of claim 13, wherein the amount of the said compound of claim 1 is from
about 0.01 to about 20 % by weight based on the weight of the material to be stabilized.

15. The method of claim 13, wherein the material to be stabilized is selected from the
group consisting of polyolefins, polyesters, polyethers, polyketones, polyamides, natural and
synthetic rubbers, polyurethanes, polystyrenes, high-impact polystyrenes, polyacrylates,
polymethacrylates, polyacetals, polyacrylonitriles, polybutadienes, polystyrenes, ABS, SAN
(styrene acrylonitrile), ASA (acrylate styrene acrylonitrile), cellulosic acetate butyrate,
cellulosic polymers, polyimides, polyamideimides, polyetherimides, polyphenylsulfide, PPO,
polysulfones, polyethersulfones, polyvinylchlorides, polycarbonates, polyketones, aliphatic
polyketones, thermoplastic TPU's, amino resin cross-linked polyacrylates and polyesters, or
polyisocyanate cross-linked polyesters and polyacrylates, phenol/formaldehyde,
urea/formaldehyde and melamine/formaldehyde resins, drying and non-drying alkyd resins,
alkyd resins, polyester resins, acrylate resins cross-linked with melamine resins, urea resins,

isocyanates, isocyanurates, carbamates, and epoxy resins, cross-linked epoxy resins derived from aliphatic, cycloaliphatic, heterocyclic and aromatic glycidyl compounds, which are cross-linked with anhydrides or amines, polysiloxanes, Michael addition polymers, amines, blocked amines with activated unsaturated and methylene compounds, ketimines with

- 5 activated unsaturated and methylene compounds, polyketimines in combination with unsaturated acrylic polyacetoacetate resins, polyketimines in combination with unsaturated acrylic resins, radiation curable compositions, epoxymelamine resins, organic dyes, cosmetic products, cellulose-based paper formulations, photographic film paper, ink, fibers and combinations thereof.

10

16. The method of claim 15, wherein the material is a polyolefin, polyamide, polyurethane, polyester or a polycarbonate.

17. The method of claim 13 further comprising incorporation of one or more hindered

15 amine light stabilizers.

18. The method according to claim 17, wherein said hindered amine comprises at least one member of the group consisting of: bis(2,2,6,6-tetramethylpiperidin-4-yl) sebacate;

bis(2,2,6,6-tetramethylpiperidin-4-yl)succinate; bis(1,2,2,6,6-pentamethylpiperidin-4-

20 yl)sebacate; bis(1-octyloxy-2,2,6,6-tetramethylpiperidin-4-yl)sebacate; bis(1,2,2,6,6-pentamethylpiperidin-4-yl) n-butyl 3,5-di-tert-butyl-4-hydroxybenzylmalonate; the condensate of 1-(2-hydroxyethyl)-2,2,6,6-tetramethyl-4-hydroxypiperidine and succinic acid; the condensate of N,N'-bis(2,2,6,6-tetramethylpiperidin-4-yl)hexamethylenediamine and 4-tert-

octylamino-2,6-dichloro-1,3,5-triazine; tris(2,2,6,6-tetramethylpiperidin-4-yl) nitrilotriacetate;

25 tetrakis(2,2,6,6-tetramethylpiperidin-4-yl)- 1,2,3,4-butanetetracarboxylate; 1,1'-(1,2-ethanediyil)bis(3,3,5,5-tetramethylpiperazinone); 4-benzoyl-2,2,6,6-tetramethylpiperidine; 4-stearyoxy-2,2,6,6-tetramethylpiperidine; bis(1,2,2,6,6-pentamethylpiperidyl)-2-n-butyl-2-(2-hydroxy-3,5-di-tert-butylbenzyl)malonate; 3-n-octyl-7,7,9,9-tetramethyl-1,3,8-triazaspiro[4.5]decan-2,4-dione; bis(1-octyloxy-2,2,6,6-tetramethylpiperidyl)sebacate; bis(1-

30 octyloxy-2,2,6,6-tetramethylpiperidyl)succinate; the condensate of N,N'-bis(2,2,6,6-tetramethylpiperidin-4-yl)hexamethylenediamine and 4-morpholino-2,6-dichloro-1,3,5-triazine; the condensate of 2-chloro-4,6-bis(4-n-butylamino-2,2,6,6-tetramethylpiperidyl)-1,3,5-triazine and 1,2-bis(3-aminopropylamino)ethane; the condensate of 2-chloro-4,6-bis(4-n-butylamino-1,2,2,6,6-pentamethylpiperidyl)-1,3,5-triazine and 1,2-bis-(3- aminopropylamino)ethane; 8-acetyl-3-dodecyl-7,7,9,9-tetramethyl-1,3,8-triazaspiro[4.5]decane-2,4-dione; 3-dodecyl-1-

- (2,2,6,6-tetramethylpiperidin-4-yl)pyrrolidin-2,5-dione; 3-dodecyl-1-(1-ethanoyl-2,2,6,6-tetramethylpiperidin-4-yl)pyrrolidin-2,5-dione; 3-dodecyl-1-(1,2,2,6,6-pentamethylpiperidin-4-yl)pyrrolidine-2,5-dione; a mixture of 4-hexadecyloxy- and 4-stearyloxy-2,2,6,6-tetramethylpiperidine; the condensate of N,N'-bis(2,2,6,6-tetramethylpiperidin-4-yl)hexamethylenediamine and 4-cyclohexylamino-2,6-dichloro-1,3,5-triazine; the condensate of 1,2-bis(3-aminopropylamino)ethane, 2,4,6-trichloro-1,3,5-triazine and 4-butylamino-2,2,6,6-tetramethylpiperidine; 2-undecyl-7,7,9,9-tetramethyl-1-oxa-3,8-diaza-4-oxospiro[4.5]decane; oxo-piperanzinyl-triazines; and the reaction product of 7,7,9,9-tetramethyl-2-cycloundecyl-1-oxa-3,8-diaza-4-oxospiro[4.5]decane and epichlorohydrin.
- 10 19. The method according to claim 13 further comprising incorporation of one or more additional UV absorbers wherein the additional UV absorber is a benzotriazole derivative, a triazine derivative, a benzophenone derivative, or a combination thereof.
- 15 20. A method of stabilizing a material which is subject to degradation by actinic radiation by incorporating said material with the compound of claims 9, 10, 11 or 12.
21. A composition comprising
(a) the compound of claim 1; and
20 (b) at least one other additive selected from group consisting of: UV stabilizers and antioxidants.
22. The composition of claim 21 wherein said at least one other additive is selected from the group consisting of 2-(2'-hydroxyphenyl)benzotriazoles, oxamides, 2-(2-hydroxyphenyl)-1,3,5-triazines, 2-hydroxybenzophenones, sterically hindered amines and hindered phenol antioxidants.
23. The composition of claim 22 wherein said at least other additive is selected from the group consisting of: 2-(2'-hydroxy-5'-methylphenyl)-benzotriazole; 2-(3',5'-di-tert-butyl-2'-hydroxyphenyl)benzotriazole; 2-(5'-tert-butyl-2'-hydroxyphenyl)benzotriazole; 2-(2'-hydroxy-5'-
30 (1,1,3,3-tetramethylbutyl)phenyl)benzotriazole; 2-(3',5'-di-tert-butyl-2'-hydroxyphenyl)-5-chlorobenzotriazole; 2-(3'-tert-butyl-2'-hydroxy-5'-methylphenyl)-5-chloro-benzotriazole; 2-(3'-sec-butyl-5'-tert-butyl-2'-hydroxyphenyl)-benzotriazole; 2-(2'-hydroxy-4'-octoxyphenyl)benzotriazole; 2-(3',5'-di-tert-amyl-2'-hydroxphenyl)benzotriazole; 2-(3',5'-bis(α,α -dimethylbenzyl)-2'-hydroxyphenyl)-benzotriazole; a mixture of 2-(3'-tert-butyl-2'-

hydroxy-5'-(2-octyloxycarbonylethyl)phenyl)-5-chloro-benzotriazole, 2-(3'-tert-butyl-5'-[2-(2-ethylhexyloxy)-carbonylethyl]-2'-hydroxyphenyl)-5-chloro-benzotriazole, 2-(3'-tert-butyl-2'-hydroxy-5'-(2-methoxycarbonylethyl)phenyl)-5-chloro-benzotriazole, 2-(3'-tert-butyl-2'-hydroxy-5'-(2-methoxycarbonylethyl)phenyl)benzotriazole, 2-(3'-tert-butyl-2'-hydroxy-5'-(2-octyloxycarbonylethyl)phenyl)benzotriazole, 2-(3'-tert-butyl-5'-[2-(2-ethylhexyloxy)carbonylethyl]-2'-hydroxyphenyl)benzotriazole, 2-(3'-dodecyl-2'-hydroxy-5'-methylphenyl)benzotriazole and 2-(3'-tert-butyl-2'-hydroxy-5'-(2-isooctyloxycarbonylethyl)phenyl)benzotriazole; 2,2-methylenebis[4-(1,1,3,3-tetramethylbutyl)-6-benzotriazol-2-ylphenol], the transesterification product of 2-[3'-tert-butyl-5'-(2-methoxycarbonylethyl)-2'-hydroxyphenyl]benzotriazole with polyethylene glycol 300; [R—CH₂CH—COO(CH₂)₃]₂ B where R = 3'-tert-butyl-4'-hydroxy-5'-2H-benzotriazol-2-ylphenyl; bis(2,2,6,6-tetramethylpiperidin-4-yl) sebacate; bis(2,2,6,6-tetramethylpiperidin-4-yl)succinate; bis(1,2,2,6,6-pentamethylpiperidin-4-yl)sebacate; bis(1-octyloxy-2,2,6,6-tetramethylpiperidin-4-yl)sebacate; bis(1,2,2,6,6-pentamethylpiperidin-4-yl) n-butyl 3,5-di-tert-butyl-4-hydroxybenzylmalonate; the condensate of 1-(2-hydroxyethyl)-2,2,6,6-tetramethyl-4-hydroxypiperidine and succinic acid; the condensate of N,N'-bis(2,2,6,6-tetramethylpiperidin-4-yl)hexamethylenediamine and 4-tert-octylamino-2,6-dichloro-1,3,5-triazine; tris(2,2,6,6-tetramethylpiperidin-4-yl) nitrilotriacetate; tetrakis(2,2,6,6-tetramethylpiperidin-4-yl)-1,2,3,4-butanetetracarboxylate; 1,1'-(1,2-ethanediyl)bis(3,3,5,5-tetramethylpiperazinone); 4-benzoyl-2,2,6,6-tetramethylpiperidine; 4-stearyloxy-2,2,6,6-tetramethylpiperidine; bis(1,2,2,6,6-pentamethylpiperidyl)-2-n-butyl-2-(2-hydroxy-3,5-di-tert-butylbenzyl)malonate; 3-n-octyl-7,7,9,9-tetramethyl-1,3,8-triazaspiro[4.5]decan-2,4-dione; bis(1-octyloxy-2,2,6,6-tetramethylpiperidyl)sebacate; bis(1-octyloxy-2,2,6,6-tetramethylpiperidyl)succinate; the condensate of N,N'-bis(2,2,6,6-tetramethylpiperidin-4-yl)hexamethylenediamine and 4-morpholino-2,6-dichloro-1,3,5-triazine; the condensate of 2-chloro-4,6-bis(4-n-butylamino-2,2,6,6-tetramethylpiperidyl)-1,3,5-triazine and 1,2-bis(3-aminopropylamino)ethane; the condensate of 2-chloro-4,6-bis(4-n-butylamino-1,2,2,6,6-pentamethylpiperidyl)-1,3,5-triazine and 1,2-bis-(3- aminopropylamino)ethane; 8-acetyl-3-dodecyl-7,7,9,9-tetramethyl-1,3,8-triazaspiro[4.5]decane-2,4-dione; 3-dodecyl-1-(2,2,6,6-tetramethylpiperidin-4-yl)pyrrolidin-2,5-dione; 3-dodecyl-1-(1-ethanoyl-2,2,6,6-tetramethylpiperidin-4-yl)pyrrolidin-2,5-dione; 3-dodecyl-1-(1,2,2,6,6-pentamethylpiperidin-4-yl)pyrrolidine-2,5-dione; a mixture of 4-hexadecyloxy- and 4-stearyloxy-2,2,6,6-tetramethylpiperidine; the condensate of N,N'-bis(2,2,6,6-tetramethylpiperidin-4-yl)hexamethylenediamine and 4-cyclohexylamino-2,6-dichloro-1,3,5-triazine; the condensate of 1,2-bis(3-aminopropylamino)ethane, 2,4,6-trichloro-1,3,5-triazine and 4-butylamino-2,2,6,6-tetramethylpiperidine; 2-undecyl-7,7,9,9-tetramethyl-

1-oxa-3,8-diaza-4-oxospiro[4.5]decane; oxo-piperanzinyl-triazines and the reaction product of 7,7,9,9-tetramethyl-2-cycloundecyl-1-oxa-3,8-diaza-4-oxospiro[4.5]decane and epichlorohydrin;

2,4,6-tris(2-hydroxy-4-octyloxyphenyl)-1,3,5-triazine; 2-(2-hydroxy-4-n-octyloxyphenyl)-4,6-

5 bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-(2-hydroxy-4-(mixed iso-octyloxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-(2,4-dihydroxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2,4-bis(2-hydroxy-4-propyloxyphenyl)-6-(2,4-dimethylphenyl)-1,3,5-triazine; 2-(2-hydroxy-4-octyloxyphenyl)-4,6-bis(4-methylphenyl)-1,3,5-triazine; 2-(2-hydroxy-4-dodecyloxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-(2-hydroxy-4-

10 tridecyloxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-[2-hydroxy-4-(2-hydroxy-3-butyoxypropoxy)phenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-[2-hydroxy-4-(2-hydroxy-3-octyloxypropoxy)-phenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-[4-

dodecyloxy/tridecyloxy-2-hydroxypropoxy)-2-hydroxyphenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-[2-hydroxy-4-(2-hydroxy-3-dodecyloxypropoxy)phenyl]-4,6-bis(2,4-

15 dimethylphenyl)-1,3,5-triazine; 2-(2-hydroxy-4-hexyloxy)phenyl-4,6-diphenyl-1,3,5-triazine; 2-(2-hydroxy-4-methoxyphenyl)-4,6-diphenyl-1,3,5-triazine; 2,4,6-tris[2-hydroxy-4-(3-butoxy-2-hydroxypropoxy)phenyl]-1,3,5-triazine; 2-(2-hydroxyphenyl)-4-(4-methoxyphenyl)-6-phenyl-

1,3,5-triazine, 2,4-dihydroxybenzophenone; 2-hydroxy-4-methoxybenzophenone; 2-hydroxy-4-octyloxybenzophenone; 2-hydroxy-4-decyloxybenzophenone; 2-hydroxy-4-

20 dodecyloxybenzophenone; 2-hydroxy-4-benzyloxybenzophenone, 4,2',4-trishydroxybenzophenone; 2'-hydroxy-4,4'-dimethoxybenzophenone; 1,3,5-tris(2,6-dimethyl-4-tert-butyl-3hydroxybenzyl)isocyanurate; 1,3,5-tris(3,5-di-tert-butyl-4-hydroxybenzyl)isocyanurate; 1,3,5- tris(3,5- di-tert-butyl-4-hydroxybenzyl) -2,4,6-trimethylbenzene; 2,6-di-tert-butyl-4-methylphenol; 2,2'-ethylidene-bis(4,6-di-tert-butylphenol);

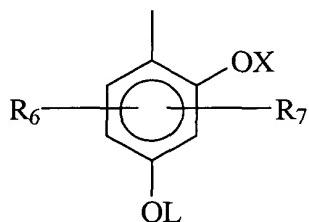
25 1,1,3-tris(5-tert-butyl-4-hydroxy-2-methylphenyl)butane; esters of β -(3,5-di-tert-butyl-4-hydroxyphenyl)propionic acid with mono- or polyhydric alcohols;

esters of β -(5-tert-butyl-4-hydroxy-3-methylphenyl)propionic acid with mono- or polyhydric alcohols; dimethyl-2,5-di-tert-butyl-4-hydroxybenzylphosphonate; diethyl-3,5-di-tert-butyl-4-hydroxybenzylphosphonate; dioctadecyl-3,5-di-tert-butyl-4-hydroxybenzylphosphonate;

30 dioctadecyl-5-tert-butyl-4-hydroxy-3-methylbenzylphosphonate; and the calcium salt of the monoethyl ester of 3,5-di-tert-butyl-4-hydroxybenzylphosphonic acid; amides of β -(3,5-di-tert-butyl-4-hydroxyphenylpropionyl)hexamethylenediamine; N,N'-bis(3,5-di-tert-butyl-4-hydroxyphenylpropionyl)trimethylenediamine; and N,N'-bis(3,5-di-tert-butyl-4-hydroxyphenylpropionyl)hydrazine.

24. The composition of claim 23 wherein TZ is

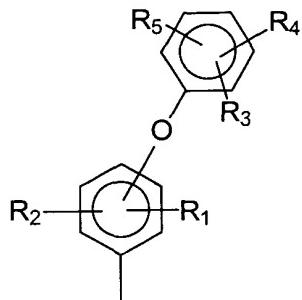
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and T' is oxygen, Y is L and R₁ to R₇ and X are hydrogen.

10 25. The composition of claim 23 wherein TZ is:

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and T' is oxygen, Y is L and R₁ to R₇ and X are hydrogen.

20 26. The composition of claim 21 further comprising a material to be stabilized selected from the group consisting of: polyolefins, polyesters, polyethers, polyketones, polyamides, natural and synthetic rubbers, polyurethanes, polystyrenes, high-impact polystyrenes, polyacrylates, polymethacrylates, polyacetals, polyacrylonitriles, polybutadienes, polystyrenes, ABS, styrene acrylonitrile, acrylate styrene acrylonitrile, cellulosic acetate butyrate, cellulosic polymers, polyimides, polyamideimides, polyetherimides, polyphenylsulfides, polyphenylene oxide, polysulfones, polyethersulfones, polyvinylchlorides, polycarbonates, polyketones, aliphatic polyketones, thermoplastic TPO's, aminoresin cross-linked polyacrylates and polyesters, polyisocyanate cross-linked polyesters and polyacrylates, phenol/formaldehyde, urea/formaldehyde and melamine/formaldehyde resins, drying and
25 non-drying alkyd resins, alkyd resins, polyester resins, acrylate resins cross-linked with melamine resins, urea resins, isocyanates, isocyanurates, carbamates, epoxy resins, cross-linked epoxy resins derived from aliphatic, cycloaliphatic, heterocyclic and aromatic glycidyl compounds, which are cross-linked with anhydrides or amines, polysiloxanes, Michael addition polymers, amines, blocked amines with activated unsaturated and
30 methylene compounds, ketimines with activated unsaturated and methylene compounds,

polyketimines in combination with unsaturated acrylic polyacetoacetate resins, polyketimines in combination with unsaturated acrylic resins, radiation curable compositions, epoxymelamine resins, organic dyes, cosmetic products, cellulose-based paper formulations, photographic film paper, ink, and mixtures thereof.

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27. The composition of claim 21 wherein the amount of said compound of claim 1 to said at least one other additive is from about 500:1 to about 1:500 by weight.

28. A composition comprising

10 (a) the compound of claims 9, 10, 11 or 12; and

(b) at least one other additive selected from group consisting of: 2-(2'-hydroxy-5'-methylphenyl)-benzotriazole; 2-(3',5'-di-tert-butyl-2'-hydroxyphenyl)benzotriazole; 2-(5'-tert-butyl-2'-hydroxyphenyl)benzotriazole; 2-(2'-hydroxy-5'-(1,1,3,3-tetramethylbutyl)phenyl)benzotriazole; 2-(3',5'-di-tert-butyl-2'-hydroxyphenyl)-5-chlorobenzotriazole; 2-(3'-tert-butyl-2'-hydroxy-5'-methylphenyl)-5-chloro-benzotriazole; 2-(3'-sec-butyl-5'-tert-butyl-2'-hydroxyphenyl)-benzotriazole; 2-(2'-hydroxy-4'-octoxyphenyl)benzotriazole; 2-(3',5'-di-tert-amyl-2'-hydroxphenyl)benzotriazole; 2-(3',5'-bis(α,α -dimethylbenzyl)-2'-hydroxyphenyl)-benzotriazole; a mixture of 2-(3'-tert-butyl-2'-hydroxy-5'-(2-octyloxycarbonylethyl)phenyl)-5-chloro-benzotriazole, 2-(3'-tert-butyl-5'-[2-(2-ethylhexyloxy)-carbonylethyl]-2'-hydroxyphenyl)-5-chloro-benzotriazole, 2-(3'-tert-butyl-2'-hydroxy-5'-(2-methoxycarbonylethyl)phenyl)-5-chloro-benzotriazole, 2-(3'-tert-butyl-2'-hydroxy-5'-(2-octyloxycarbonylethyl)phenyl)benzotriazole, 2-(3'-tert-butyl-5'-[2-(2-ethylhexyloxy)carbonylethyl]-2'-hydroxyphenyl)benzotriazole, 2-(3'-dodecyl-2'-hydroxy-5'-methylphenyl)benzotriazole and 2-(3'-tert-butyl-2'-hydroxy-5'-(2-isooctyloxycarbonylethyl)phenylbenzotriazole; 2,2-methylenebis[4-(1,1,3,3-tetramethylbutyl)-6-benzotriazol-2-ylphenol], the transesterification product of 2-[3'-tert-butyl-5'-(2-methoxycarbonylethyl)-2'-hydroxyphenyl]benzotriazole with polyethylene glycol 300; [R—CH₂CH—COO(CH₂)₃]₂ B where R = 3'-tert-butyl-4'-hydroxy-5'-2H-benzotriazol-2-ylphenyl; bis(2,2,6,6-tetramethylpiperidin-4-yl) sebacate; bis(2,2,6,6-tetramethylpiperidin-4-yl)succinate; bis(1,2,2,6,6-pentamethylpiperidin-4-yl)sebacate; bis(1-octyloxy-2,2,6,6-tetramethylpiperidin-4-yl)sebacate; bis(1,2,2,6,6-pentamethylpiperidin-4-yl) n-butyl 3,5-di-tert-butyl-4-hydroxybenzylmalonate; the condensate of 1-(2-hydroxyethyl)-2,2,6,6-tetramethyl-4-hydroxypiperidine and succinic acid; the condensate of N,N'-bis(2,2,6,6-tetramethylpiperidin-4-yl)hexamethylenediamine and 4-tert-octylamino-2,6-dichloro-1,3,5-triazine; tris(2,2,6,6-

tetramethylpiperidin-4-yl) nitrilotriacetate; tetrakis(2,2,6,6-tetramethylpiperidin-4-yl)- 1,2,3,4-butane tetra carboxylate; 1,1'-(1,2-ethanediyl)bis(3,3,5,5-tetramethylpiperazinone); 4-benzoyl-2,2,6,6-tetramethylpiperidine; 4-stearyl oxy-2,2,6,6-tetramethylpiperidine; bis(1,2,2,6,6-pentamethyl(piperidyl)-2-n-butyl-2-(2-hydroxy-3,5-di-tert-butylbenzyl)malonate; 3-n-octyl-7,7,9,9-tetramethyl-1,3,8-triazaspiro[4.5]decan-2,4-dione; bis(1-octyloxy-2,2,6,6-tetramethylpiperidyl)sebacate; bis(1-octyloxy-2,2,6,6-tetramethylpiperidyl)succinate; the condensate of N,N'-bis(2,2,6,6-tetramethylpiperidin-4-yl)hexamethylenediamine and 4-morpholino-2,6-dichloro-1,3,5-triazine; the condensate of 2-chloro-4,6-bis(4-n-butylamino-2,2,6,6-tetramethylpiperidyl)-1,3,5-triazine and 1,2-bis(3-aminopropylamino)ethane; the condensate of 2-chloro-4,6-bis(4-n-butylamino-1,2,2,6,6-pentamethylpiperidyl)-1,3,5-triazine and 1,2-bis(3-aminopropylamino)ethane; 8-acetyl-3-dodecyl-7,7,9,9-tetramethyl-1,3,8-triazaspiro[4.5]decane-2,4-dione; 3-dodecyl-1-(2,2,6,6-tetramethylpiperidin-4-yl)pyrrolidin-2,5-dione; 3-dodecyl-1-(1-ethanoyl-2,2,6,6-tetramethylpiperidin-4-yl)pyrrolidin-2,5-dione; 3-dodecyl-1-(1,2,2,6,6-pentamethylpiperidin-4-yl)pyrrolidine-2,5-dione; a mixture of 4-hexadecyloxy- and 4-stearyl oxy-2,2,6,6-tetramethylpiperidine; the condensate of N,N'-bis(2,2,6,6-tetramethylpiperidin-4-yl)hexamethylenediamine and 4-cyclohexylamino-2,6-dichloro-1,3,5-triazine; the condensate of 1,2-bis(3-aminopropylamino)ethane, 2,4,6-trichloro-1,3,5-triazine and 4-butylamino-2,2,6,6-tetramethylpiperidine; 2-undecyl-7,7,9,9-tetramethyl-1-oxa-3,8-diaza-4-oxospiro[4.5]decane; oxo-piperanzinyl-triazines and the reaction product of 7,7,9,9-tetramethyl-2-cycloundecyl-1-oxa-3,8-diaza-4-oxospiro[4.5]decane and epichlorohydrin;

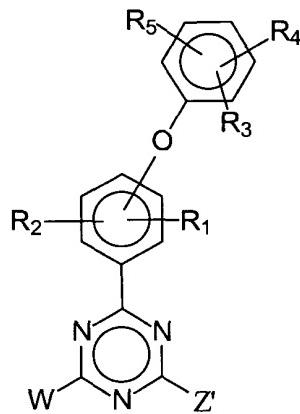
2,4,6-tris(2-hydroxy-4-octyloxyphenyl)-1,3,5-triazine; 2-(2-hydroxy-4-n-octyloxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-(2-hydroxy-4-(mixed iso-octyloxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-(2,4-dihydroxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2,4-bis(2-hydroxy-4-propyloxyphenyl)-6-(2,4-dimethylphenyl)-1,3,5-triazine; 2-(2-hydroxy-4-hydroxy-4-octyloxyphenyl)-4,6-bis(4-methylphenyl)-1,3,5-triazine; 2-(2-hydroxy-4-dodecyloxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-(2-hydroxy-4-tridecyloxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-[2-hydroxy-4-(2-hydroxy-3-butyloxypropoxy)phenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-[2-hydroxy-4-(2-hydroxy-3-octyloxypropoxy)-phenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-[4-hydroxy-3-octyloxypropoxy)-phenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-[4-dodecyloxy/tridecyloxy-2-hydroxypropoxy)-2-hydroxyphenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-[2-hydroxy-4-(2-hydroxy-3-dodecyloxypropoxy)phenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-(2-hydroxy-4-hexyloxy)phenyl-4,6-diphenyl-1,3,5-triazine; 2-(2-hydroxy-4-methoxyphenyl)-4,6-diphenyl-1,3,5-triazine; 2,4,6-tris[2-hydroxy-4-(3-butoxy-2-hydroxypropoxy)phenyl]-1,3,5-triazine; 2-(2-hydroxyphenyl)-4-(4-methoxyphenyl)-6-phenyl-

- 1,3,5-triazine, 2,4-dihydroxybenzophenone; 2-hydroxy-4-methoxybenzophenone; 2-hydroxy-4-octyloxybenzophenone; 2-hydroxy-4-decyloxybenzophenone; 2-hydroxy-4-dodecyloxybenzophenone; 2-hydroxy-4-benzylbenzophenone, 4,2',4-trishydroxybenzophenone; 2'-hydroxy-4,4'-dimethoxybenzophenone;
- 5 1,3,5-tris(2,6-dimethyl-4-tert-butyl-3-hydroxybenzyl)isocyanurate; 1,3,5-tris(3,5-di-tert-butyl-4-hydroxybenzyl)isocyanurate; 1,3,5-tris(3,5-di-tert-butyl-4-hydroxybenzyl)-2,4,6-trimethylbenzene; 2,6-di-tert-butyl-4-methylphenol; 2,2'-ethylidene-bis(4,6-di-tert-butylphenol); 1,1,3-tris(5-tert-butyl-4-hydroxy-2-methylphenyl)butane; esters of β -(3,5-di-tert-butyl-4-hydroxyphenyl)propionic acid with mono- or polyhydric alcohols;
- 10 10 esters of β -(5-tert-butyl-4-hydroxy-3-methylphenyl)propionic acid with mono- or polyhydric alcohols; dimethyl-2,5-di-tert-butyl-4-hydroxybenzylphosphonate; diethyl-3,5-di-tert-butyl-4-hydroxybenzylphosphonate; dioctadecyl-3,5-di-tert-butyl-4-hydroxybenzylphosphonate; dioctadecyl-5-tert-butyl-4-hydroxy-3-methylbenzylphosphonate; and the calcium salt of the monoethyl ester of 3,5-di-tert-butyl-4-hydroxybenzylphosphonic acid; amides of β -(3,5-di-tert-butyl-4-hydroxyphenyl)propionic acid such as N,N'-bis(3,5-di-tert-butyl-4-hydroxyphenylpropionyl)hexamethylenediamine; N,N'-bis(3,5-di-tert-butyl-4-hydroxyphenylpropionyl)trimethylenediamine; and N,N'-bis(3,5-di-tert-butyl-4-hydroxyphenylpropionyl)hydrazine.
- 15 20 29. The composition of claim 28 wherein the amount of said compound to said at least one other additive if from about 500:1 to about 1:500 by weight.
- 20 30. The composition of claim 28 further comprising a material to be stabilized selected from the group consisting of polyolefins, polyesters, polyethers, polyketones, polyamides, natural and synthetic rubbers, polyurethanes, polystyrenes, high-impact polystyrenes, polyacrylates, polymethacrylates, polyacetals, polyacrylonitriles, polybutadienes, polystyrenes, ABS, SAN (styrene acrylonitrile), ASA (acrylate styrene acrylonitrile), cellulosic acetate butyrate, cellulosic polymers, polyimides, polyamideimides, polyetherimides, polyphenylsulfide, PPO, polysulfones, polyethersulfones, polyvinylchlorides, polycarbonates, polyketones, aliphatic polyketones, thermoplastic TPU's, amino resin cross-linked polyacrylates and polyesters, or polyisocyanate cross-linked polyesters and polyacrylates, phenol/formaldehyde, urea/formaldehyde and melamine/formaldehyde resins, drying and non-drying alkyd resins, alkyd resins, polyester resins, acrylate resins cross-linked with melamine resins, urea resins, isocyanates, isocyanurates, carbamates, and epoxy resins, cross-linked epoxy resins derived from aliphatic, cycloaliphatic, heterocyclic and aromatic
- 25 30 35

glycidyl compounds, which are cross-linked with anhydrides or amines, polysiloxanes, Michael addition polymers, amines, blocked amines with activated unsaturated and methylene compounds, ketimines with activated unsaturated and methylene compounds, polyketimines in combination with unsaturated acrylic polyacetoacetate resins, polyketimines 5 in combination with unsaturated acrylic resins, radiation curable compositions, epoxymelamine resins, organic dyes, cosmetic products, cellulose-based paper formulations, photographic film paper, ink, fibers and combinations thereof.

31. A compound having the Formula

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wherein R₁, R₂, R₃, R₄, R₅ are the same or different and each is hydrogen, halogen, alkyl of 1 20 to 24 carbon atoms, haloalkyl of 1 to 24 carbon atoms, aryl of 6 to 24 carbon atoms, alkenyl of 2 to 24 carbon atoms, acyl of 1 to 24 carbon atoms, aralkyl of 7 to 24 carbon atoms, aracyl of 6 to 24 carbon atoms, OR, NRR', CONRR', OCOR, CN, SR, SO₂R, SO₃H, SO₃M, wherein 25 M is an alkali metal, R and R' are the same or different and each is hydrogen, alkyl of 1 to 24 carbon atoms, haloalkyl of 1 to 24 carbon atoms, aryl of 6 to 24 carbon atoms, alkenyl of 2 to 24 carbon atoms, acyl of 1 to 24 carbon atoms, cycloalkyl of 1 to 24 carbon atoms, cycloacyl of 5 to 24 carbon atoms, aralkyl of 7 to 24 carbon atoms, or aracyl of 6 to 24 carbons atoms, and optionally with either of R₁ and R₂, R₃ and R₄, or R₄ and R₅, taken together being a part 30 of a saturated or unsaturated fused carbocyclic ring optionally containing O, N, or S atoms in the ring;

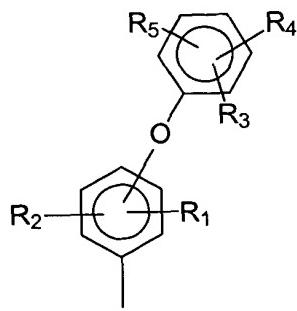
30

Z' is a halogen,

and W is

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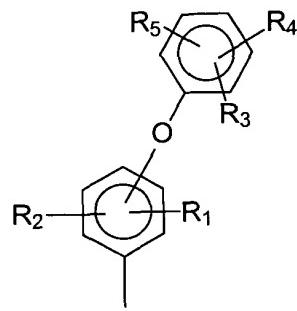


or a halogen.

10 32. The compound of claim 31 wherein W is a halogen.

33. The compound of claim 31 wherein W is

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34. The compound of claim 31 wherein said halogen is chlorine.